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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,755	02/20/2004	Hiroshi Sakamoto	056208.53268US	3735

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EXAMINER

LE, DAVID D

ART UNIT	PAPER NUMBER
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3681

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/781,755	<b>Applicant(s)</b> SAKAMOTO ET AL.	
	<b>Examiner</b> David D. Le	<b>Art Unit</b> 3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>02/20/04</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This is the first Office action on the merits of Application No. 10/781,755, filed on 20 February 2004. Claims 1-12 are pending.

### **Documents**

2. The following documents have been received and filed as part of the patent application:
  - Information Disclosure Statement, received on 02/20/04
  - Foreign Priority Document, received on 02/20/04

### ***Specification***

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because it contains legal phraseology "means". Correction is required. See MPEP § 608.01(b).

5. The disclosure is objected to because of the following informalities:

- Page 10, line 11, "transmission 40" should be --transmission 50--;
- Page 11, line 7, "transmission 20" should be --transmission 50--.

Appropriate correction is required.

### *Claim Objections*

6. Claims 1, 3, 5, 7, and 9-12 are objected to because of the following informalities:

- Lines 2-3 of the above-mentioned claims, "a plurality of synchronizer" should be --a plurality of synchronizers--;
- Lines 8-9 of the above-mentioned claims, "said plurality of synchronizer" should be --said plurality of synchronizers--.

7. Claims 2, 4, 6, and 8 are objected to because of the following informalities:

- Lines 5-7 of the mentioned claims, the limitations "the temperature", "the heat quantity", and "the abrasion loss" should be --a temperature--, --a heat quantity--, and --an abrasion loss--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. **Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

**Claim 1:**

- Line 7 recites the limitation “synchronizeres”. It is unclear whether applicant is referring to the plurality of synchronizers or the synchronizer rings.
- Line 14 recites the limitations “the first connection” and “the second connection”. There is insufficient antecedent basis for these limitations in the claim.
- Lines 15-16 recite the limitation “at least one synchronizer”. It is unclear whether this synchronizer is part of the plurality of synchronizers, as first recited on line 3 of the claim.
- Lines 26-27 recite the limitation “a synchronizer”. It is unclear whether this synchronizer is part of the plurality of synchronizers, as first recited on line 3 of the claim.

**Claim 3:**

- Line 7 recites the limitation “synchronizeres”. It is unclear whether applicant is referring to the plurality of synchronizers or the synchronizer rings.

- Line 14 recites the limitations "the first connection" and "the second connection". There is insufficient antecedent basis for these limitations in the claim.
- Lines 15-16 recite the limitation "at least one synchronizer". It is unclear whether this synchronizer is part of the plurality of synchronizers, as first recited on line 3 of the claim.

Claim 5:

- Line 7 recites the limitation "synchronizeres". It is unclear whether applicant is referring to the plurality of synchronizers or the synchronizer rings.
- Lines 14-15 recite the limitations "the first connection" and "the second connection". There is insufficient antecedent basis for these limitations in the claim.
- Lines 16-17 recite the limitation "at least one synchronizer". It is unclear whether this synchronizer is part of the plurality of synchronizers, as first recited on line 3 of the claim.

Claim 6:

- Line 9 recites the limitations "said drive power source torque control means". There is insufficient antecedent basis for this limitation in the claim.

Claim 7:

- Line 7 recites the limitation “synchronizeres”. It is unclear whether applicant is referring to the plurality of synchronizers or the synchronizer rings.
- Lines 14-15 recite the limitations “the first connection” and “the second connection”. There is insufficient antecedent basis for these limitations in the claim.
- Lines 16-17 recite the limitation “at least one synchronizer”. It is unclear whether this synchronizer is part of the plurality of synchronizers, as first recited on line 3 of the claim.
- Line 40 recites the limitation “a parameter”. It is unclear whether this parameter is different from the one, which is previously recited on line 35 of the claim.

Claim 9:

- Line 7 recites the limitation “synchronizeres”. It is unclear whether applicant is referring to the plurality of synchronizers or the synchronizer rings.
- Line 14 recites the limitations “the first connection” and “the second connection”. There is insufficient antecedent basis for these limitations in the claim.
- Lines 15-16 recite the limitation “at least one synchronizer”. It is unclear whether this synchronizer is part of the plurality of synchronizers, as first recited on line 3 of the claim.

- Lines 24-25 recite the limitation “a synchronizer”. It is unclear whether this synchronizer is part of the plurality of synchronizers, as first recited on line 3 of the claim.

Claim 10:

- Line 7 recites the limitation “synchronizeres”. It is unclear whether applicant is referring to the plurality of synchronizers or the synchronizer rings.
- Line 14 recites the limitations “the first connection” and “the second connection”. There is insufficient antecedent basis for these limitations in the claim.
- Lines 15-16 recite the limitation “at least one synchronizer”. It is unclear whether this synchronizer is part of the plurality of synchronizers, as first recited on line 3 of the claim.

Claim 11:

- Line 7 recites the limitation “synchronizeres”. It is unclear whether applicant is referring to the plurality of synchronizers or the synchronizer rings.
- Lines 14-15 recite the limitations “the first connection” and “the second connection”. There is insufficient antecedent basis for these limitations in the claim.
- Lines 16-17 recite the limitation “at least one synchronizer”. It is unclear whether this synchronizer is part of the plurality of synchronizers, as first recited on line 3 of the claim.



Claim 12:

- Line 7 recites the limitation “synchronizeres”. It is unclear whether applicant is referring to the plurality of synchronizers or the synchronizer rings.
- Lines 14-15 recite the limitations “the first connection” and “the second connection”. There is insufficient antecedent basis for these limitations in the claim.
- Lines 16-17 recite the limitation “at least one synchronizer”. It is unclear whether this synchronizer is part of the plurality of synchronizers, as first recited on line 3 of the claim.
- Line 35 recites the limitation “a parameter”. It is unclear whether this parameter is different from the one, which is previously recited on line 32 of the claim.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. **Claims 1-12, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 6,145,398 to Bansbach et al.**

Claims 1-12:

Bansbach (i.e., Figs. 1-16; column 3, line 13 – column 12, line 14) discloses an electronically controlled shift system for a synchronized automatic manual transmission comprising:

- An input shaft (i.e., Fig. 3);
- An output shaft (i.e., Fig. 3);
- A plurality of synchronized gears (352);
- A temperature sensor (46);
- A shift lever (26);
- A shift rail (62);
- A state discrimination means (being the transmission control module 20) for inferring a state of a frictional surface of a plurality of synchronizers (i.e., Fig. 3);
- A synchronizer selecting means (being the combination of the shift lever 26 and the shift rail 62) for selecting a synchronizer of the plurality of synchronizers for forming an intermediate transfer path according to a parameter (being the various elements of the formula used in the calculation) indicating the state of the frictional surface inferred by the state discrimination means (i.e., column 5, line 15 - column 6, line 39);
- A drive power source torque control means (being the shift system 10) for controlling the torque of the drive power source during the shifting process of the transmission;

- Wherein the parameter indicating the state of the frictional surface inferred by the state discrimination means is the heat quantity (i.e., the dynamic coefficient of friction); and
- Wherein the drive power source torque control means reduces the torque of the drive power source according to the parameter inferred by the state discrimination means is larger than a predetermined value (i.e., column 10, lines 11-27).

### *Conclusion*

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


- Park (U. S. Patent No. 5,701,984) teaches a synchronizer for an automobile transmission as shown in Fig. 3.
- Miyazaki (U. S. Patent No. 6,394,929) teaches a shift control apparatus and a shift control method of an automatic transmission as shown in Fig. 1.
- Kamiya et al. (U. S. Patent No. 6,631,318) teaches a control device applied in a synchromesh-type transmission as shown in Fig. 7.
- Kennedy (U. S. Patent Application Publication No. US 2005/0043139) teaches an automatic gear system as shown in Fig. 2.
- Huschka et al. (U. S. Patent Application Publication No. US 2002/0038747) teaches a method of detecting the operating state of a friction clutch as shown in Fig. 1.
- Hiraiwa (U. S. Patent Application Publication No. US 2004/0163917) teaches a synchronizer for speed reducer as shown in Fig. 1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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